

FOREWORD

This environmental statement was prepared to provide a detailed analysis of the actual and potential environmental effects associated with waste management operations at the Savannah River Plant. The Savannah River Plant (SRP) near Aiken, South Carolina is a nuclear material production facility of the Energy Research and Development Administration (ERDA).^{*} This statement covers the management of both radioactive and nonradioactive gas, liquid, solid, and thermal discharges from current and projected SRP operations and accumulated waste from past operations. Alternatives to current waste management operations are discussed. Available data on past operations are presented for background and to help characterize the existing and expected future condition of SRP.

The Federal action under review is the interim management of SRP wastes in accordance with ERDA policies and standards that require continued efforts to reduce releases to values that are as far as practical below guidelines which minimize risk to the population, and to develop improved methods of waste storage. Thus, the descriptive material in this statement presents detailed background information that may be used as a basis for environmental assessments or statements on long-range plans as they develop. The status of the SRP long-range waste management research and development program is presented in Appendix I. ERDA presently is preparing technical documents for SRP, Hanford and Idaho installations on alternative methods for long-term management of high-level radioactive wastes at these sites (described in Appendix I). These documents, which will serve as the basis for environmental statements on long-range management, should be available for public review in 1977.

* ERDA was created by the Energy Reorganization Act of 1974 (January 19, 1975) to assume the operational and research and development functions of the Atomic Energy Commission, which was abolished by the Act.

In accordance with ERDA regulations,¹ future statements will be written late enough in the development process to contain meaningful information, but early enough that whatever information is contained may be factored into the decision making processes. These statements will be prepared before the development process has reached a stage of investment or commitment to implementation likely to foreclose or restrict later alternatives. None of the possible options for long-range management of SRP wastes is being foreclosed by current or projected operations.

The scope of this environmental statement is limited to effluent control and interim defense waste management operations at SRP. In this respect, it is similar to the waste management operations environmental statements for two other major production sites of the ERDA. The final statement concerning the Hanford reservation at Richland, Washington, has been published (ERDA-1538),² and the draft statement for the Idaho National Engineering Laboratory (ERDA-1536)³ was issued June 29, 1976.

In this environmental statement, possible combined effects of the effluents from SRP, the Barnwell Nuclear Fuel Plant (BNFP), and the proposed Vogtle Nuclear Plant (VNP) are considered. The BNFP is a chemical separations plant for processing commercial nuclear fuel now under construction by Allied-General Nuclear Services (AGNS) on a site adjacent to SRP on the east. The VNP was proposed by the Georgia Power Company as a possible nuclear power plant to be constructed across the Savannah River from SRP on the west. Environmental statements for these plants were prepared by the former Licensing Branch of the AEC, now the Nuclear Regulatory Commission (NRC), in conjunction with the normal licensing procedures for commercial nuclear plants. No effluents are expected from the commercial waste burial facility of the Chem-Nuclear Services, Inc., another nuclear facility adjacent to SRP and BNFP.

Future production operations at the Savannah River Plant may vary from their present level. However, the environmental impact will be of the same nature and order as for 1975. The

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1. *U. S. Code of Federal Regulations*, Title 10, Part 711.
 2. *Final Environmental Statement, Waste Management Operations, Hanford Reservation*. USERDA Report ERDA-1538 (1975).
 3. *Draft Environmental Statement, Waste Management Operations, Idaho National Engineering Laboratory*. USERDA Report ERDA-1536 (June, 1976).

trend will be toward further reductions in the releases of some materials, but some increases may occur due to changes in production requirements. The accumulation of radioactive liquid and solid wastes will also proceed at about the same rate as in 1975. Cumulative offsite effects to the surrounding population beyond the year of actual release will be small as discussed in Section III.A.4.

Because implementation of any program to provide improved methods of storage will take place over many years, new waste tanks are being planned to satisfy the needs for 1) storage space for new wastes generated during the 1970s and 1980s, 2) replacement of single-wall tanks, and 3) replacement of double-wall tanks that have a history of leakage from the primary into the secondary container. Before the publication of this statement, two environmental statements on specific additional waste handling and storage facilities at SRP were issued. The statements were in support of an FY-1974 project (WASH-1528)⁴ for four waste tanks and an evaporator, and an FY-1975 project (WASH-1530)⁵ for six waste tanks and an evaporator. Because of increased costs, these projects were revised to include only three and four waste tanks, respectively, with no evaporators. The environmental impact of additional tanks planned for the future will be of the same nature and order as that for the previous tanks.

All radionuclides released from the SRP site to the environment are discussed in this statement. The data are presented so as not to reveal classified production information, but this does not affect the estimation of offsite effects from the releases.

The notification of the preparation of this statement, published in the Federal Register on August 14, 1973 (38 FR 21955), invited suggestions from all interested persons. Comments were received from individuals and organizations and were answered by ERDA prior to preparation of the draft statement. Careful review of each comment letter resulted in identification of specific suggestions that were included into Draft ERDA-1537. The comment letters and ERDA's response, including discussion and action on specific comments, were published as Appendix K of Draft ERDA-1537.

4. *Environmental Statement, Future High Level Waste Facilities, Savannah River Plant, Aiken, South Carolina.* USAEC Report WASH-1528 (1973).
5. *Environmental Statement, Additional High Level Waste Facilities, Savannah River Plant, Aiken, South Carolina.* USAEC Report WASH-1530 (1974).

The issuance of the draft statement was announced in the Federal Register on October 29, 1976 (41 FR 27284), and public comments were requested within 90 days. A total of eleven comment letters were received from individuals and organizations. The issues raised by these comments have been considered in the preparation of this final statement and text changes have been made where appropriate. Moreover, the comments on the draft statement along with the responses by ERDA replace the previous Appendix K in the final statement. Copies of the final statement, the draft statement, and all written suggestions and comments received, as well as the documents referenced by this statement are available for inspection at ERDA Public Document Rooms at 1333 Broadway, Oakland, California; 20 Massachusetts Avenue, Washington, D.C.; and the Savannah River Operations Office at SRP.